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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,343	02/20/2004	David Wortendyke	MS1-1825US	7693
22801	7590	09/15/2006	EXAMINER	
LEE & HAYES PLLC 421 W RIVERSIDE AVENUE SUITE 500 SPOKANE, WA 99201			SYED, FARHAN M	
			ART UNIT	PAPER NUMBER
			2165	

DATE MAILED: 09/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/783,343

Applicant(s)

WORTENDYKE ET AL.

Examiner

Farhan M. Syed

Art Unit

2165

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/20/04, 6/1/04, 6/18/04, 10/15/04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-38 are pending.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Figure 1, item 104; Figure 4, item 412; Figure 5, item 510; and Figure 6, item 623. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 24-34 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As per claims 24-34, these claims recite "one or more computer-readable medium containing computer-executable instructions" Based on the Applicant's specification, page 26, lines 16-19, that reads "Communication media typically embodies computer-readable instructions, data structures, program modules or other data in a modulated data signal such as a carrier wave or other transport mechanism and includes any information delivery media." However these data signals are not tangible, and cannot tangibly embody a computer program or process since a computer cannot understand/realize (i.e. execute) the computer program or process when embodied on the data signal. Computer program or processes are only realized within the computer when stored in a memory or storage element (such as RAM or ROM). Therefore, a data signal does not meet the "useful, concrete, and tangible" requirement as set forth in *State Street*, 149 F.3d at 1373, 47 USPQ2d at 1601-02, and hence claims 25-32 are non statutory under 35 U.S.C. 101. Furthermore, the Examiner refers to the Interim Guidelines (http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101_20051026.pdf) for a further explanation of the use of signals and carrier waves.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-38 are rejected under 35 U.S.C. 102(b) as being anticipated by a non-patent literature titled "Efficient Filtering of XML Documents for Selective Dissemination of Information" by Mehmet Altinel, et al., 26th VLDB Conference, 2000, pages 53-64 (known hereinafter as Altinel).

As per claims 1, 7, 15, 24, and 35, Altinel teaches a method, comprising:

receiving an input (i.e. *"There are two main sets of inputs to the system: user profiles and data items (i.e., documents). User profiles describe the information preferences of individual users. In most systems these profiles are created by the users, typically by clicking on items in a Graphical User Interface."* The preceding text clearly indicates that receiving an input is an input to the system by the user.)(Page 54, section 2.1); traversing an opcode tree that includes a plurality of opcode nodes which together define opcodes that should be executed to evaluate a plurality of queries (i.e. *"XPath provides a flexible way to specify path expressions. It treats an XML document as a tree of nodes; XPath expressions are patterns that can be matched to nodes in the XML tree."* *"In contrast, in SDI systems, large numbers of queries are stored, and the documents are individually matched to the queries."* *"In order to handle prefix evaluation, List Balance uses a stack which keeps track of the traversed element nodes in the document."* The preceding text clearly indicates that an opcode tree is an XML document and opcode nodes are tree of nodes in an XML document.)(Page 54, section 2.2; page 55, section 3; Page 59, section 5.1); executing each of the opcode nodes in the opcode tree as each opcode node is encountered in the traversal to evaluate the plurality of queries

against the input (i.e. *"The Query Index is used to match documents to individual XPath queries."*)

*"The events that drive the execution of the Filter Engine are generated by the XML Parser (as described in the following section). In the XFilter **execution** model, a profile is considered to match a document when the final state of its FSM is reached. The Query Index is built over the states of the XPath queries."*

The preceding text clearly indicate that execution takes place within the Xfilter execution model, where opcode nodes, which are nodes within an XML documents, and plurality of queries are Xpath queries.)(Page 56, section 4.1).

As per claim 2, Altinel teaches a method, the executing step further comprising using an intermediate result to execute an opcode node when the opcode node includes one or more ancestor opcode nodes that have been executed to derive the intermediate result (Page 56, section 4).

As per claim 3, Altinel teaches a method, the executing step further comprising executing a single opcode node to evaluate at least a portion of at least two of the plurality of queries (Page 54, section 2.1, 2.2; page 56, section 4, 4.1).

As per claims 4, 10, 23, and 27, Altinel teaches a method, the multiple queries further comprising Xpath queries (i.e. *"The Query Index is used to match documents to individual Xpath queries."*)(Page 56, section 4, 4.1).

As per claims 5, 8, 19, 29, and 37, Altinel teaches a method, the executing step further comprising executing a branch node to execute multiple opcode nodes that

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depend from the branch node, the branch node including an indexed branch lookup function (i.e. Figure 5 depicts an example of executing multiple nodes in Figure 5, section a, titled Example Queries and Corresponding Path Nodes, where the path nodes are multiple opcode nodes that depend from the branch node.)(Page 59, Figure 5).

As per claims 6, 9, 31, 32 and 38, Altinel teaches a method, further comprising a hash function as the indexed branch lookup procedure (i.e. Figure 5 depicts an example of a hash table. An ordinary person skilled in the art anticipates the use of a hash function when using a hash table.)(Page 59, Figure 5).

As per claim 11, Altinel teaches an opcode tree data structure, further comprising at least one shared segment that corresponds to multiple queries (Page 56, section 4, 4.1; page 57, section 4.2).

As per claim 12, Altinel teaches an opcode tree data structure, wherein a single execution of the shared segment evaluates at least a portion of each of the multiple queries (Page 56, section 4.1).

As per claim 13, Altinel teaches an inverse query engine containing the opcode tree data structure (i.e. *"For this purpose, similar to traditional SDI systems, the Filter Engine component of Xfilter contains an inverted index, called the Query Index."*)(Page 56, section 4.1).

As per claims 14, 18, and 36, Altinel teaches an opcode tree data structure, further comprising a branch node that includes references to more than two dependent opcode nodes (i.e. Figure 3a, titled Example Queries and Corresponding Path Nodes clearly indicate that a branch node is '//b' and more than two dependent opcode nodes are /*/c/d)(Page 57, Figure 3).

As per claim 16, Altinel teaches a query evaluation system, further comprising an input module configured to receive an input (i.e. *"There are two main sets of inputs to the system: user profiles and data items (i.e., documents). User profiles describe the information preferences of individual users. In most systems these profiles are created by the users, typically by clicking on items in a Graphical User Interface."* The preceding text clearly indicates that receiving an input is an input to the system by the user.)(Page 54, section 2.1) that is evaluated against each of the plurality of queries when the query processor executes the opcode nodes (i.e. *"The Query Index is used to match documents to individual XPath queries."* *"The events that drive the execution of the Filter Engine are generated by the XML Parser (as described in the following section). In the XFilter execution model, a profile is considered to match a document when the final state of its FSM is reached. The Query Index is built over the states of the XPath queries."* The preceding text clearly indicate that execution takes place within the Xfilter execution model, where opcode nodes, which are nodes within an XML documents, and plurality of queries are Xpath queries.)(Page 56, section 4.1).

As per claim 17, Altinel teaches a query evaluation system, further configured to receive a SOAP (Simple Object Access Protocol) message as the input that is evaluated against the plurality of queries (Page 56, sections 4, 4.1).

As per claim 20, Altinel teaches a query evaluation system, further comprising an interim results cache that stores results of opcode node executions that are used in the execution of subsequent opcode nodes (Page 56, sections 4, 4.1).

As per claim 21, Altinel teaches a query evaluation system, further comprising a filter table that stores the plurality of queries, the filter table further including a reference to the opcode tree (Page 54, section 2.1; page 55, section 2.2; page 56, section 4.1).

As per claim 22, Altinel teaches a query evaluation system, an opcode object common to multiple queries further comprising an opcode object that is in a similar location of an opcode object sequence at the beginning of the multiple queries (Page 56, section 4.1).

As per claim 25, Altinel teaches a computer-readable media, wherein the first segment of opcode nodes includes ancestor opcode nodes of the second opcode node (Page 56, section 4.1; page 57, section 4.2; page 58, sections 4.3, 5).

As per claim 26, Altinel teaches a computer-readable media, the executing opcode nodes further comprising executing each opcode node a single time (i.e. *"The Query Index is used to match documents to individual XPath queries."* *"The events that drive the execution of the Filter Engine are generated by the XML Parser (as described in the following section). In the XFilter **execution** model, a profile is considered to match a document when the final state of its FSM is reached. The Query Index is built over the states of the XPath queries."* The preceding text clearly

indicate that execution takes place within the Xfilter execution model, where opcode nodes, which are nodes within an XML documents, and plurality of queries are Xpath queries.)(Page 56, section 4.1).

As per claim 28, Altinel teaches a computer-readable media, further comprising executing one or more branch nodes to execute one or more opcode nodes that depend from the branch node (Page 56, sections 4, 4.1).

As per claim 30, Altinel teaches a computer-readable media, further comprising executing one or more indexed branch nodes to execute a plurality of opcode nodes that depend from the branch node, the plurality of opcode nodes including a similar comparison function (Page 56, section 4.1).

As per claim 33, Altinel teaches a computer-readable media, further comprising receiving an input that is evaluated against the plurality of queries using the opcode tree (i.e. *"There are two main sets of inputs to the system: user profiles and data items (i.e., documents). User profiles describe the information preferences of individual users. In most systems these profiles are created by the users, typically by clicking on items in a Graphical User Interface."* The preceding text clearly indicates that receiving an input is an input to the system by the user.)(Page 54, section 2.1).

As per claim 34, Altinel teaches a computer-readable media, further comprising a compiler configured to execute each query in the plurality of queries to derive the opcode nodes (i.e. *"The Query Index is used to match documents to individual XPath queries."* *"The events that drive the execution of the Filter Engine are generated by the XML Parser (as described in the*

following section). In the XFilter **execution** model, a profile is considered to match a document when the final state of its FSM is reached. The Query Index is built over the states of the XPath queries." The preceding text clearly indicate that execution takes place within the Xfilter execution model, where opcode nodes, which are nodes within an XML documents, and plurality of queries are Xpath queries.)(Page 56, section 4.1).

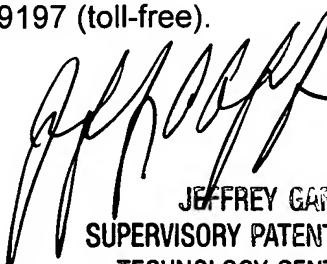
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Farhan M. Syed whose telephone number is 571-272-7191. The examiner can normally be reached on 8:30AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FMS


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